NOVEMBER/DECEMBER 2023

CEL32/BEL32 — ANALOG ELECTRONICS

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

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1. What is an amplifier?
2. What is an emitter follower?
3. What is a negative feedback?
4. State effects of negative feedback on gain.
5. What is a slew rate?
6. Define CMMR.
7. What is an inverting adder?
8. What is an Integrator?
9. What is an oscillator?
10. Mention Barkhausen criterion for oscillation.

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SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Explain Class A and Class B power amplifiers.

Or

(b) Elucidate the action of a single ended amplifier.

12. (a) Discuss general characteristics of a negative feedback amplifier.

Or

(b) Explain Input and output resistance in the case of various types of feedback.

13. (a) Outline the transfer characteristics of OP-AMP.

Or

(b) Explain the action of a differential amplifier.

14. (a) Enumerate the action of a comparator.

Or

(b) Discuss the action of a differentiator.

15. (a) Explain the action of a Hartley oscillator.

Or

(b) Describe the action of a UJT relaxation oscillator.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the action of push-pull amplifier.

17. Discuss the general characteristics of negative feedback amplifier and analysis of voltage and current in feedback amplifier circuit.

18. Describe the various parameters of OP-AMP.

19. Explain the action of square and triangular waveform generator.

20. Discuss the action of a monostable multivibrator.

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